



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

SEP 20 2011

REPLY TO THE ATTENTION OF.

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Michael W. Hult, P.E.
Environmental Engineering Specialist
3M Environmental, Health and Safety Operations
3M Center, Building 0224-05-W-03
St. Paul, Minnesota 55144-1000

Katrina Hendricks
Senior Environmental Engineer
3M Company
10746 Innovation Road
Cottage Grove, Minnesota 66016

Dear Mr. Hult and Ms. Hendricks:

The U.S. Environmental Protection Agency is issuing the enclosed Notice and Finding of Violation (NOV/FOV) to 3M Company (3M or you) relating to emission sources at the Cottage Grove Abrasives Systems Division (Abrasives Systems Division) located at 10746 Innovation Road, Cottage Grove, Minnesota. We find that you have violated and/or are in violation of the Minnesota State Implementation Plan (MN SIP), Title V of the Clean Air Act (CAA) and its implementing regulations, and the New Source Performance Standards at 40 C.F.R Part 60, promulgated under Section 111(b) of the Clean Air Act, 42 U.S.C. § 7411(b), at the Abrasives Systems Division.

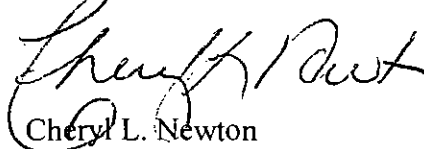
We have several enforcement options under Section 113(a) of the CAA, 42 U.S.C. § 7413(a). These options include issuing an administrative compliance order, issuing an administrative penalty order and bringing a judicial civil or criminal action.

We appreciate your self-disclosure relating to some of the alleged violations in this NOV/FOV and the information you have provided EPA to date. We are offering you an opportunity to confer with us about the violations alleged in the NOV/FOV. The conference will give you the opportunity to present information on the specific findings of violation, the efforts you have taken to comply, and the steps you will take to prevent future violations.

Please plan for your facility's technical and management personnel to attend the conference to discuss compliance measures and commitments. You may have an attorney represent you at this conference.

The EPA contact in this matter is Shilpa Patel. You may call her at 312-886-0120 to request a conference. You should make the request within 10 calendar days following receipt of this letter. We should hold any conference within 30 calendar days following receipt of this letter.

Sincerely,

A handwritten signature in black ink, appearing to read "Cheryl L. Newton", written over a circular stamp or seal.

Cheryl L. Newton

Director

Air and Radiation Division

Enclosure:

cc: Jeff Connell, Section Manager Compliance & Enforcement

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5**

IN THE MATTER OF:

**3M Company
Cottage Grove, Minnesota**

Proceedings Pursuant to
the Clean Air Act,
42 U.S.C. §§ 7401 *et seq.*

NOTICE AND FINDING OF VIOLATION

EPA-5-11-MN-07

NOTICE AND FINDING OF VIOLATION

The U.S. Environmental Protection Agency is issuing this Notice of Violation and Finding of Violation (NOV/FOV or Notice) to 3M Company (3M), for violations of the Clean Air Act (the CAA), 42 U.S.C. §§ 7401 *et seq.*, at its Cottage Grove Abrasives Systems Division (Abrasives Systems Division) located at 10746 Innovation Road, Cottage Grove, Minnesota.

This Notice is issued pursuant to Section 113(a)(1) and (3) of the Act, 42 U.S.C. § 7413(a)(1) and (3). The authority to issue this Notice has been delegated to the Regional Administrator of EPA Region 5 and redelegated to the Director, Air and Radiation Division, Region 5.

Statutory and Regulatory Authority

New Source Performance Standards

1. Section 111(b) of the CAA, 42 U.S.C. § 7411(b), requires EPA to publish a list of categories of sources, which, in EPA's judgment, cause or contribute significantly to air pollution that may reasonably be anticipated to endanger public health or welfare, and to promulgate standards of performance for new stationary sources within these categories. These standards are known as "new source performance standards" or "NSPS."
2. The NSPS are national technology-based performance standards for air pollutant sources constructed or modified after a specified date. The purpose of the standards is to ensure that all new or modified sources of air pollutants will be designed to meet emission limitations achievable through the application of the best demonstrated system for emission reduction considering the cost of achieving such reduction and any non-air quality health and environmental impact and energy requirements.
3. Section 111(e) of the CAA, 42 U.S.C. § 7411(e), prohibits the owner or operator of any new source from operating such source in violation of any standard of performance applicable to such source.
4. Under Section 111(b) of the CAA, 42 U.S.C. § 7411(b), EPA promulgates NSPS for categories of sources and codifies those requirements at 40 C.F.R. Part 60.

5. 40 C.F.R. Part 60, Subpart A contains general provisions applicable to the owner or operator of any stationary source which contains an affected facility subject to NSPS. These include definitions at 40 C.F.R. § 60.2, notification and record keeping provisions at 40 C.F.R. § 60.7 and performance test requirements at 40 C.F.R. § 60.8.
6. Under 40 C.F.R. § 60.2, an “affected facility” means any apparatus subject to a performance standard under the NSPS regulations.
7. Under 40 C.F.R. § 60.2, “construction” means fabrication, erection or installation of an affected facility.
8. The NSPS, at 40 C.F.R. § 60.7(a)(1), require the owner or operator of an affected facility to furnish EPA a notification of the date of construction of an affected facility postmarked no later than 30 days after such date.
9. The NSPS, at 40 C.F.R. § 60.7(a)(3), require the owner or operator of an affected facility to furnish EPA a notification of the actual date of initial startup of an affected facility postmarked within 15 days after such date.
10. The NSPS, at 40 C.F.R. § 60.8, require the owner or operator of an affected facility to conduct a performance test on the affected facility and to furnish EPA a written report of the results of the performance test within 60 days after achieving the maximum production rate at which the affected facility will be operated, but no later than 180 days after initial startup of the affected facility.
11. In 1992, EPA promulgated standards of performance for calciners and dryers in mineral industries, which were codified at 40 C.F.R. Part 60, Subpart UUU (“NSPS Subpart UUU”). 57 Fed. Reg. 44503 (September 28, 1992).
12. Under 40 C.F.R. § 60.730, the affected facility to which NSPS Subpart UUU applies is each calciner and dryer at a mineral processing plant that and commences construction, modification, or reconstruction after April 23, 1986.
13. Under 40 C.F.R. § 60.731, “calciner” means the equipment used to remove combined (chemically bound) water and/or gases from mineral material through direct or indirect heating. This definition includes expansion furnaces and multiple hearth furnaces.
14. Under 40 C.F.R. § 60.731, “dryer” means the equipment used to remove uncombined (free) water from mineral material through direct or indirect heating.
15. Under 40 C.F.R. § 60.731, “mineral processing plant” means any facility that processes or produces any of the following minerals, their concentrates or any mixture of which the majority (>50 percent) is any of the following minerals or a combination of these minerals: alumina, ball clay, bentonite, diatomite, feldspar, fire clay, fuller’s earth, gypsum, industrial sand, kaolin, lightweight aggregate, magnesium compounds, perlite, roofing granules, talc, titanium dioxide, and vermiculite.

16. The NSPS, at 40 C.F.R. § 60.736, set forth test methods that owners and operators of affected facilities must use when conducting the performance test(s) required under 40 C.F.R. § 60.8.
17. The NSPS, at 40 C.F.R. § 60.734(d), provide that the owner or operator of an affected facility who uses a wet scrubber¹ to comply with the mass emission standard for any affected facility shall install, calibrate, maintain, and operate monitoring devices that continuously measure and record the pressure loss of the gas stream through the scrubber and the scrubbing liquid flow rate to the scrubber.
18. The NSPS, at 40 C.F.R. § 60.735(b), provide that each owner or operator who uses a wet scrubber to comply with the emission limits in 40 C.F.R. § 60.732 shall determine and record once each day, from the recordings of the monitoring devices in 40 C.F.R. § 60.734(d), an arithmetic average over a 2-hour period of both the change in pressure of the gas stream across the scrubber and the flowrate of the scrubbing liquid. Under 40 C.F.R. § 60.735(a), records of the measurements set forth above shall be retained for at least 2 years. 40 C.F.R. § 60.735(c) requires that each owner or operator submit written reports semiannually of exceedances of control device operating parameters required to be monitored by NSPS Subpart UUU.

Title V Requirements

19. Section 502(a) of the Act, 42 U.S.C. § 7661a(a), provides that no source may operate without a Title V permit after the effective date of any permit program approved or promulgated under Title V of the Act. EPA first promulgated regulations governing state operating permit programs on July 21, 1992. *See* 57 Fed. Reg. 32295; 40 C.F.R. Part 70. EPA promulgated regulations governing the federal operating permit program on July 1, 1996. *See* 61 Fed. Reg. 34228; 40 C.F.R. Part 71.
20. Section 503 of the Act, 42 U.S.C. § 7661b, sets forth the requirement to submit a timely, accurate, and complete application for a permit, including information required to be submitted with the application.
21. Section 504(a) of the Act, 42 U.S.C. § 7661c(a), requires that each Title V permit include enforceable emission limitations and standards, a schedule of compliance, and other conditions necessary to assure compliance with applicable requirements, including those contained in a state implementation plan. 42 U.S.C. § 7661c(a).

¹ While the NSPS Subpart UUU does not contain a specific definition for “wet scrubber,” the term is defined elsewhere in EPA regulations. *See, e.g.*, 40 C.F.R. § 62.14840 “wet scrubber means an add-on air pollution control device that utilizes aqueous or alkaline scrubbing liquor to collect particulate matter . . . and/or to absorb and neutralize acid gases” and 40 C.F.R. § 63.7575 “wet scrubber means any add-on air pollution control device that mixes an aqueous stream or slurry with the exhaust gases from a boiler or process heater to control emissions or particulate matter and/or to absorb and neutralize acid gases, such as hydrogen chloride.” Additionally, “wet scrubber” is defined in EPA Guidance document EPA/452/B-02-001, EPA Air Pollution Control Cost Manual, as an air pollution control device that removes PM and acid gases from a waste gas stream of stationary point sources. The pollutants are removed primarily through the impaction, diffusion, interception and/or absorption of the pollutant onto droplets of liquid. The liquid containing the pollutant is then collected for disposal.

22. 40 C.F.R. § 70.5(a) and (c) require timely and complete permit applications for Title V permits with required information that must be submitted and 40 C.F.R. § 70.6 specifies required permit content. To be deemed complete, an application must contain information sufficient to evaluate the subject source and its application and to determine all applicable requirements.
23. 40 C.F.R. § 70.5(b) provides that: "Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information. In addition, an applicant shall provide additional information as necessary to address any requirements that become applicable to the source after the date it filed a complete application but prior to release of a draft permit."
24. EPA approved Minnesota's Title V operating program on an interim basis on June 16, 1995 and fully approved the program on December 1, 2001. *See* 57 Fed. Reg. 31637, and 66 Fed. Reg. 62967. Minnesota's Title V operating permit program regulations are codified at Minn. R. 7007 and are federally enforceable pursuant to Section 113(a)(3) of the CAA, 42 U.S.C. § 7413a(3).

Minnesota's State Implementation Plan

25. Section 110 of the CAA, 42 U.S.C. § 7410, requires each state to adopt and submit to EPA a plan that provides for the implementation, maintenance, and enforcement of primary and secondary National Ambient Air Quality Standards (NAAQS) in the state. Upon approval by EPA, the plan becomes part of the applicable State Implementation Plan (SIP) for the state.
26. On July 24, 1995, EPA approved the Minnesota (MN) SIP requirement at Minn. R. 7007.0500 as part of the federally approved MN SIP. 60 Fed. Reg. 27411. The MN SIP at Minn. R. 7007.0500 requires a Title V applicant to submit an application that includes all information needed to determine the applicability of, or to impose, any applicable requirement. An application must include, *inter alia*, all applicable requirements to which a source is subject, enforceable emission limitations and standards, a schedule of compliance, and other conditions necessary to assure compliance with all applicable requirements.
27. The MN SIP at Minn. R. 7007.0500, Subpart 3, requires a responsible official to sign and certify any Title V application with regard to the truth, accuracy and completeness of the information contained within.

Findings of Fact

28. 3M owns and operates a mineral processing plant (Abrasives Systems Division) located at 10746 Innovation Road, Cottage Grove, Minnesota.
29. On October 31, 2003, the Minnesota Pollution Control Agency (MPCA) issued CAA Title V Permit Air Emission Permit Number 16300017-002, effective November 11, 2005 (Title V Permit) to 3M Cottage Grove Abrasive Systems Division.

30. 3M owns and operates emission units EU002, EU026, EU033 and EU028 at the Abrasives Systems Division, as identified in its Title V Permit.
31. 3M did not include the applicability of NSPS Subpart UUU to emission units EU002, EU026, EU033 and EU028 in its Title V application to MPCA on April 17, 1995 or when it submitted a major amendment to the Title V Permit on June 6, 2005.
32. On March 7, 2011, 3M submitted an applicability determination request to EPA as to whether emission units EU002, EU026, EU033 at the Abrasives Systems Division are subject to NSPS Subpart UUU.
33. On March 7 and May 25, 2011, 3M submitted a self disclosure of potential violations of NSPS Subpart UUU to EPA relating to emission units EU002, EU026, EU033 and EU028. For each affected facility, 3M disclosed that it failed to submit a notification of the date of construction as required by 40 C.F.R. § 60.7(a)(1), failed to submit notification of the actual date of initial start up as required by 40 C.F.R. § 60.7(a)(3), and failed to complete an initial performance test for particulate matter and opacity as required by 40 C.F.R. § 60.8.
34. On April 5, 2011, EPA issued 3M an applicability determination, finding that emission units EU002, EU026, EU033 at its Abrasives Systems Division are subject to NSPS Subpart UUU.²
35. On May 27, 2011, 3M submitted notifications of the dates of construction and initial start-up for emission units EU002, EU026, EU033 and EU028 to EPA.
36. On May 27, 2011, 3M submitted a letter to EPA in which it stated that it will complete stack performance tests for particulate matter and opacity to demonstrate compliance with the emission limits of NSPS Subpart UUU, for emission units EU002, EU026, EU033 and EU028, by September 15, 2011.
37. On August 5, 2011, EPA notified 3M that it did not qualify for possible reduction or elimination of gravity-based penalties under EPA's Audit Policy, (*See* 65 Fed. Reg. 19618 (April 11, 2000)), associated with 3M's disclosed violations of NSPS Subpart UUU at the Abrasives Systems Division.
38. On September 9, 2011, 3M submitted a response to EPA's request for information issued pursuant to Section 114 of the CAA, 42 U.S.C. § 7414.
39. In 3M's March 7, 2011 self-disclosure letter to EPA, 3M stated that emission units EU002, EU026 and EU033 were installed at the Abrasives Systems Division in 1989, 1995 and 2000, respectively.

² EPA did not issue a finding with respect to the applicability of emission unit EU028 because 3M disclosed the applicability and potential violations related to that emission unit on May 25, 2011, after EPA had issued 3M an applicability determination. As 3M stated in its May 25, 2011 letter to EPA, "given EPA's statement that the final water content is irrelevant to the applicability of NSPS UUU, 3M has concluded that [emission unit EU028] is potentially subject to NSPS UUU."

40. In 3M's March 7, 2011, applicability determination request to EPA, 3M stated that emission units EU002, EU026 and EU033 remove moisture from an alumina gel slurry to a 20-25 percent moisture content level.
41. In EPA's April 5, 2011 applicability determination to 3M, EPA determined that emission units EU002, EU026 and EU033 are equipment used to remove uncombined water from mineral material through direct or indirect heating and therefore are dryers as defined in 40 C.F.R. § 60.731.
42. In 3M's May 25, 2011 self-disclosure follow-up letter to EPA, 3M stated that emission unit EU028 was installed at the Abrasives Systems Division in 1995.
43. In 3M's May 25, 2011 self-disclosure follow-up letter to EPA, 3M stated that emission unit EU028 removes moisture from an alumina gel slurry to a 40-50 percent moisture content level.
44. Emission unit EU028 is equipment used to remove uncombined water from mineral material through direct or indirect heating and therefore is a dryer as defined in 40 C.F.R. § 60.731.
45. 3M uses a wet scrubber to comply with the mass emission standard for emission unit EU028.
46. 3M has not installed, calibrated, maintained and operated any monitoring device that continuously measures and records the pressure loss of the gas stream through the scrubber and the scrubbing liquid flow rate to the scrubber and does not record the gas stream across the scrubber and the flowrate of the scrubbing liquid daily for emission unit EU028.
47. Emission units EU002, EU026, EU033 and EU028 are each an "affected facility" under the NSPS regulations.
48. 3M is the owner and operator of affected facilities that commenced construction after April 23, 1986 and therefore is subject to the NSPS regulations.

Notice and Finding of Violations

Violations of NSPS

49. 3M failed to notify EPA of the dates of construction for emission units EU002, EU026, EU033 and EU028 at the Abrasives Systems Division in accordance with deadlines set forth at 40 C.F.R. § 60.7(a)(1), in violation of 40 C.F.R. § 60.7(a)(1) and Section 111 of the CAA, 42 U.S.C. § 7411.
50. 3M failed to notify EPA of the actual dates of initial startup for emission units EU002, EU026, EU033, and EU028 at the Abrasives Systems Division in accordance with deadlines set forth at 40 C.F.R. § 60.7(a)(3), in violation of 40 C.F.R. § 60.7(a)(3) and Section 111 of the CAA, 42 U.S.C. § 7411.

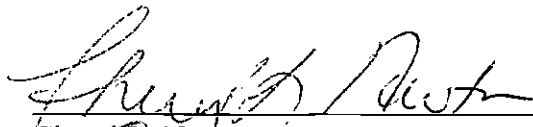
51. 3M failed to conduct a performance test for emission units EU002, EU026, EU033 and EU028 at the Abrasives Systems Division in accordance with the deadlines set forth at 40 C.F.R. § 60.8 and using the test methods required by 40 C.F.R. § 60.736, in violation of 40 C.F.R. § 60.8 and Section 111 of the CAA, 42 U.S.C. § 7411.
52. 3M failed to install, calibrate, maintain and operate monitoring devices that continuously measure and record the pressure loss of the gas stream through the scrubber and the scrubbing liquid flow rate to the scrubber for emission unit EU028, in violation of 40 C.F.R. § 60.734(d) and Section 111 of the CAA, 42 U.S.C. § 7411.
53. 3M failed to determine and record once each day from the monitoring device required by 40 C.F.R. § 60.734(d), an arithmetic average over a 2-hour period of both the change in pressure of the gas stream across the scrubber and the flowrate of the scrubbing liquid for emission unit EU028, in violation of 40 C.F.R. § 60.735 and Section 111 of the CAA, 42 U.S.C. § 7411.

Violations of the Minnesota State Implementation Plan and Title V Permit Program

54. 3M failed to submit a timely and complete application for a Title V operating permit for the Abrasives Systems Division that: (i) identifies all applicable requirements, including the applicability of NSPS Subpart UUU to emission units EU002, EU026, EU033 and EU028; (ii) accurately certifies compliance with such requirements; and (iii) contains a compliance plan for all applicable requirements for which it is not in compliance, in violation of the MN SIP at Minn. R. Chapter 7007.0500; Title V of the CAA, and 40 C.F.R. Part 70.

Date

9/20/11


Cheryl D. Newton
Director

Air and Radiation Division

CERTIFICATE OF MAILING

I, Betty Williams, certify that I sent a Notice and Finding of Violation, No.

EPA-5-11-MN-07, by Certified Mail, Return Receipt Requested, to:

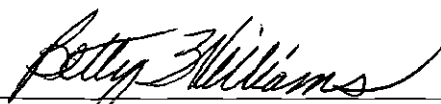
Michael W. Hult, P.E., Environmental Engineering Specialist
3M Environmental, Health and Safety Operations
3M Center, Building 0224-05-W-03
St. Paul, Minnesota 55144-1000

Katrina Hendricks
Senior Environmental Engineer
10746 Innovation Road
Cottage Grove, Minnesota 66016

I also certify that I sent copies of the Finding of Violation by first-class mail to:

Jeff Connell, Section Manager
Compliance & Enforcement
Minnesota Pollution Control Agency
520 Lafayette Road N
St. Paul, Minnesota 55155-4194

On the 20th day of September 2011.


Betty Williams
Administrative Program Assistant
Planning Administration Section

CERTIFIED MAIL RECEIPT NUMBER: 7009168000076727761

CERTIFIED MAIL RECEIPT NUMBER: 7009168000076727754